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AND

JOURNAL

OF

Rural Art and Rural Taste.

(ESTABLISHED BY A. J. DOWNING, 1846.)

DEVOTED TO

Horticulture, Landscape Gardening, Rural Architecture, Rural Embellishments, Pomology, Floriculture, and all subjects of Rural Life, Literature, Art, and Taste.

Edited by

HENRY T. WILLIAMS.

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The Southern White Fig, Croton Grape, etc.

ON page 339 of the November number of the HORTICULTURIST is a notice of the fine figs of the shore of the Gulf of Mexico. It is a little over a year since, in lecturing on fruits to the senior and junior classes of Massachusetts Agricultural College, at Amherst, Mass., I said that I had seen on the Gulf shore thousands of acres of unoccupied sandy loam land where this fig grows in great luxuriance, and produced two and sometimes three crops of fine fruit each year; and that among the unoccupied industries of the South, I thought this one of preparing this fig, as in Smyrna, for European and Northern United States market, was one of the most promising. I am glad that this opinion finds another advocate. I have seen lands that would not grow cotton or corn, planted with large magnolias and figs, trees often larger than the apple tree of the North.

What is needed is that suitable examination be had by some competent person familiar with the method of preparing the Mediterranean figs for boxing and market, and experiment be begun, and the art be learned how to manufacture the now abundant figs into the sweet and dried article of commerce. Certainly lands that grow trees that twice a year cover the ground beneath them with delicious figs, when grown without care, ought with culture and care to produce them by acres, and a process of drying be had that will put tons on tons on the market. If anything is known in the Mediterranean, it were easy to know it here. As grape leaves, and especially seedling variety leaves, this were an easy matter to explain. The culture better begin with the best figs of the whole world.

The Croton Grape.

When in Washington a few weeks ago, I saw a few late-hanging and long over-ripe Croton bunches. As grown there the bunch is quite large, the berries fair in size, and the grape worthy of praise every way. Those grown on the grounds of the Agricultural Department, too, were still in a few instances on the vines, and the employees spoke well of the grape. Thus I am disposed to commend it.

Mr. Tucker, of this place, early abandoned all of his Rogers' Hybrids as worthless, in such a season as this, after the hail storm that cut to pieces the new leaves and fruit. Yet November 10th, bushels of No. 1, 15, 3, 9, 41, etc., were on the vines. I picked a couple of bushels. And I have rarely eaten them as I have now ten days, with such pleasure. The fruits have sweetened and mellowed there, and they are as delicious as Malagas. As I have often before said, December and January are the months for Rogers' No. 1, and November for Salems and some other of his numbers.

Ferns.

The transplanting of ferns, and their growth after transplantation, is quite an easy matter. The ravine just north of Cornell University is full of them, as are the ravines of the Cayuga and other lake regions. It is fortunate for us that they do not in all this rich, wheat-land region, grow to our annoyance in pastures or open lands, as they do in New England. The roots and soil about the roots removed with them, ferns become beautiful objects for globe and other glasses and glass covers, and easily keep all winter. There are students and others here whose display of them and the green and whhite mosses of Buttermilk ravine are quite commendable. We have also seen them planted on the north side of houses, where they grow in ornamental beds and become admired pets of the family. We believe they are as healthful as any other plant.

Climbing Ferns.

These for the northern part of the United States are few. The five-parted fern, climbing in New England trees, and other objects, as near Hartford, and in a few places about Springfield and Amherst, is the best one familiar to us. But the climbing ferns of the tropics and other parts of the world are numerous. Quite a number are to be seen of them under the care of Mr. Sanders, of the Agricultural Department at Washington, amid the other tropical ferns of the new plant house.

So we divest, little by little, these plants of the superstitious fears of disease or ill, and behold in ferns the beauty of their admirable structure.

Water Cress.

We notice this plant (Nasturtium Officinale) in the cold spring waters of Northern New Jersey. It is also in the cold springs at the south end of the Cayuga lake, N. Y.

Mr. Sanders, the long known and highly esteemed curator of plants of the Agricultural Department at Washington, D. C., says the Walter was one of the best there this season.

Pear orchards on the Cayuga lake, N. Y., paid well this year, as they did last. New York and Philadelphia are the best markets for pears.

Cannot some potato cultivator give us views of the best new potatoes?

The secret of no potato rot is to plant no sort over ten years old—that is, ten years since it originated from the seed. England and Ireland neglected this, and hence its rot this year. Please tell them so, Editor of HORTICULTURIST.

S. J. PARKER, M.D.

The Central Park Illustrated.

FEW of those who visit the Central Park are really aware of the many gems of scenery and architectural ornament contained within it. They pass through it too hastily, and go over only the broader and more commonly frequented paths. If you will spare the time, and step aside into by-paths, and over the vine-covered rocks, or shrubby knolls the pleasure-seeker will find some choice bits of scenery, rustic bridges, pools, fountains, waterfalls, and the most exquisite of verdured copses. The Lake naturally affords the best water views, and gathering around its shores are a hundred beautiful, but varying sketches of scenery, or specimens of bridges and rustic work; one of these, a charming view of a boat-house on the lake just west of the Central bridge, is illustrated this month in our frontispiece. There are five or six other boat-houses of picturesque outlines, scattered around the Lake, as well as several broader landings near the terrace at the head of the Mall. The Lake, as seen on some bright summer day, with gaily decorated boats, flags of brilliant colors fluttering in the breeze, and graceful swans sailing with dignified and measured strokes, and the shores and surrounding paths lined with happy visitors, make a picture of rare rural beauty. We shall continue the publication of other Central Park sketches, frequently, the coming year.

Good News to Florists.

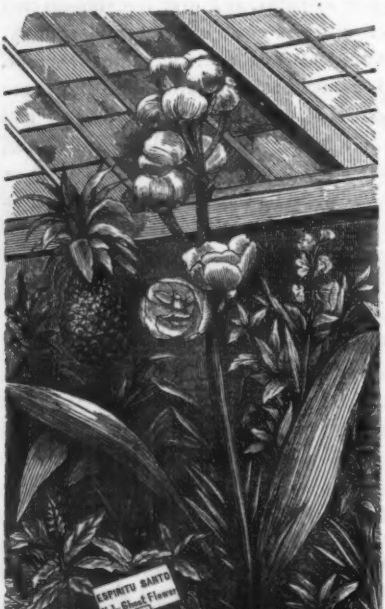
THE obnoxious law, relating to seeds, plants, etc., passed by Congress, last summer, concerning which so much gossip and criticism have passed the rounds of the press, in relation to seeds, has been repealed, and the old law now practically stands as it did last winter. We quote the following extract from the *Rural New Yorker* of December 28:

"POSTAGE ON SEEDS, BULBS, ROOTS, ETC.—Our readers will be glad to learn that both the Senate and House of Representatives have passed a bill reinstating the old rates of postage on seeds, bulbs, roots, plants, etc., for which there has been so much clamor of late in consequence of the rulings of the Postmaster-General. The amendment passed permits the passage of four-pound packages through the mails, as formerly, at the postal rate of two cents for four ounces. The act is to take effect immediately; but it will not take effect unless the Postmaster-General is pressed to send instructions at once to the postmasters of the country directing its enforcement; for postmasters cannot act without instructions, and the issue of these is often delayed months after an act of Congress goes into effect, such is the red tape machinery of the Department."

It would have been still more convenient had the rate been fixed at one cent for every *two ounces*, thus allowing more economical subdivisions than the other rate of two cents per four ounces; but we are glad enough to have the law returned and made available thus quickly for the coming seed season.

El Espirito Santo.

IN 1826, Henry Barnard, Esq., then residing in Truxillo, Peru, sent to Richard Harrison, Esq., of Liverpool, England, the bulb of a remarkable eparasitical, orchidacious plant, which he had found in the neighborhood of Panama, where it was looked upon with much consideration, and known as *El Espirito Santo*—the Holy Spirit; but which had never been seen in the conservatories of Europe. The bulb was properly cared for, and soon began to put forth leaves, but leaves only, until 1831, when it shot up its first flower stem, which sprang from the base of the bulb, while its leaves grew from the summit.



Espirito Santo—Holy Spirit Flower.

It was not until the blossom appeared that the significance of its local name was apparent. When the flower had fully opened, a most singular and beautiful appearance was presented. The fructifying column in the center of the flower, with its surmounting anther and the projecting glands of pollen-masses were observed to present a striking resemblance to a dove—the emblem of the third person in the Holy Trinity. Hence the name, *El Espirito Santo*—the Holy Spirit—was reverentially applied by the native residents, from the same religious feeling which had prompted the name of the "passion flower."

The form of a dove assumed by the parts of this flower, as described above, are remarkably true to nature. The breast, the extended wings, the head and beak, and even two purle dots for the eyes, are all distinctly shown, and almost as true to nature as the art of man can depict them.

Owing to the great heat required by this plant, and its peculiarly delicate construction, it has been found very difficult to cultivate it, artificially, away from its native region, which is comprised within the central portion of the torrid zone of the Western Continent.

Some two or three years since, as Mr. Shuman, the chief florist at Woodward's Gardens was crossing the Isthmus of Panama, he took the opportunity to make a collection of some of the most characteristic tropical plants obtainable in that locality, and among others was a specimen of the *Espirito Santo*, which still occupies the portion of the native wood upon which it was found—for it is a semi-parasitical plant. Under the excellent care and management of Mr. Shuman, with the very superior facilities furnished by Mr. Woodward, the proprietor of the gardens

for the cultivation of tropical plants, this specimen, after continuing in vigorous growth for two years, threw up its first flower stem which was duly covered with a most gorgeous show of flowers. It subsequently bloomed a second time, last fall.

Both the flowers and leaves, with the distinctive dove representation within the center of one of the flowers is shown in the accompanying illustration, which has been engraved from a photograph taken of the same while at the height of its show. The bulb, from the tops of which the leaves grow and from the base of which the flower stem springs, is not shown; but the leaves, flowers and upper portion of the flower stalk is distinctly shown.

Five leaves spring from each bulb, from twenty to thirty inches in length, by five or six in breadth—lanceolate in form. The flower stem grows from three to four feet in height, bearing upon its summit a spike of globose, fleshy, yellowish-white flowers, yielding a very peculiar and delicate perfume.

The flowering of this plant attracted much attention and a large number of visitors to the garden last season. It is expected that it will flower again this season. A carefully prepared representation of the flower was made in wax, at the time, by Mrs. A. O. Cook, of 304 Mason street, which may be seen in a small vase just to the left of the front entrance to the rotunda museum. Copies of the same have also been made, and are in possession of several persons in the city. In its native clime (Central America), this plant blooms just at the commencement of the rainy season, and, of course, just after its annual period of rest. The flowers hold on about one month. It is now known to botanists as *Peresteria alata*, and is figured in vol. 5 (new series), of *Curtis' Botanical Magazine* (No. of Engraving 3,115). The plant belongs to the order of *Orchidacea*, a class of plants of wide distribution, occupying in some of its varieties almost every portion of the earth from the equator to almost the extreme northern and southern limits of the poles. It is only, however, as we approach the equator that the varieties of this plant assume peculiar or beautiful forms. There, owing to the peculiar condition of the column, the anther containing the pollen, and the often remarkable development of some one or more of the inner leaves or petals into unusual forms, the flowers frequently take the most singular and sometimes beautiful or fantastic forms. An insect, or a spider, a butterfly, etc., sometimes a bird, as in the *peristeria alata*, not unfrequently a reptile, and sometimes a helmet with visor closed or raised, and often other singular and most beautiful forms are seen.

Sometimes there is a peculiar sensibility connected with the flower, which makes it a most effective insect trap, so hinged that it immediately entraps and holds fast any insect which may alight upon it, when its size is sufficient to enclose such intruder.

The particular specimen at Woodward's and which is herewith figured, is a pseudo-bulbous epiphyte plant—having the appearance of a bulb, but not a real bulb, and growing upon other plants but not penetrating their substance, nor absorbing their juices, as is the case with a real parasite. This variety is also sometimes found growing upon rocks or upon the earth, generally choosing dry, hilly localities. It grows well artificially in turfy peat or rotten wood. It is thus kept at Woodward's, where it is seen in a rustic hanging-basket. also cultivated in Bot Hort S.

San Francisco, Cal.

American Gooseberries.

BY H. E. HOOKER.

THE gooseberry has never assumed a very important position among American fruits, because attention has been given mainly to the foreign sorts which do not prove well adapted to our climate; some of these foreign sorts are of fine size and good quality; there is also a variety differing in size, color, habit of growth, and other characteristics, giving a valuable and agreeable diversity and adaptation to numerous uses.

The superiority of foreign sorts is due to the efforts of cultivators in securing new and improved varieties by raising numerous seedlings, and then saving and multiplying by cuttings, and disseminating the best. This has been done until there seems little more to be desired from these foreigners, except adaptation to our climate; and this difficulty I believe to be insuperable. So long as we adhere to those raised from seed grown abroad, and adjusted by nature to a different climate from ours, they *may* give pretty good results occasionally, but as a whole they will disappoint us.

The general public will derive small benefit from the gooseberry until we produce from seed of the wild American stock, or crosses with it, a multitude of new individuals from which to select and propagate those having the qualities we most desire and of special value to us.

I was struck with the fact that we had accomplished very little yet in improving this fruit, by finding, on the coast of Maine, an abundance of wild gooseberries with fruit nearly as large and good as the Houghton; these were growing without care from man, among rocks and in poor soils. If we have stock as good as this to start with, it does not speak well for us that we have thus far done so little to secure superior varieties adapted to the wants and tastes of our citizens.

Experience with other fruits shows that we must look to native grown *seedlings* for our most excellent and profitable sorts. Little can be done to change or modify the constitution of a plant by special care or culture; we must go to the *seed* for all reliable variations; and when any disposition to vary from the original wild type is discovered, we must follow it up, and, in the end, secure the results most desired.

So far as I know the gooseberry has not in this country produced many new and promising variations; it has held well to the habit of all wild fruits: not to show much change, until, in the hand of man, those conditions are secured which give safety to, and use for, individuals whose merit is not so much in hardihood of constitution, as beauty, abundance, and excellence of fruit. None of our best cultivated varieties of fruits would survive for a single century, if a wilderness were again to overspread the land, and the fruits be left to contend with the wild condition of things.

The only improved American Gooseberries which have come under my observation, are the following:

1st. The "Houghton Seedling."—This strongly resembles the wild type, but is more productive, somewhat larger, and better flavored than those found growing wild, retaining the vigor and hardiness of the original.

2d. The "Mountain."—This is very different from the first, and offers peculiarities of merit quite distinct and interesting. The plant grows tall, and very large, abundantly productive of fruit varying from large to quite small upon the same

Smith's Improved Gooseberry.

branch; with a tough skin, wild flora, and disposed to hang long upon the bush. Both this and the Houghton, are *red* in color.

3d. The "Smith's Improved."—This variety presents the habit of growth, slender branches, and moderately rapid growth of the Houghton, with much larger fruit, of a pale yellow or greenish yellow color, and excellent flavor, thin skin, and excellent table and cooking qualities. More vigor of growth in this sort would be desirable; its disposition to be a very heavy crop of fruit being prominent.

I am inclined to think pruning and liberal culture will suit this variety, and with these, I do not see how it can fail to please. The accompanying cut was correctly drawn from a well grown plant in full fruit.

4th. The "Downing."—This sort grows more in the style of some of the foreign varieties, but with much greater rapidity and vigor of root and branch. It has stout heavy wood, very thorny, and with an abundant rich foliage, which, in our grounds resisted all disease, and held on with remarkable persistence, until severe freezing removes it. This heavy foliage proves of value to the fruit, not only in the certainty of maturity, but by shielding it from sun scalding, which sometimes injures other sorts.

I cannot say that I have found the fruit of "Downing" any great improvement in flavor over the "Houghton;" but it is twice as large, and the pale green color is preferable, as most of the gooseberry crop is now used for various cooking and canning purposes: it will, I think, be found that its increased size, remarkable vigor and productiveness, good color and certain crop, will place it among the real acquisitions in this fruit.

I look upon these new sorts as additions of real merit in themselves; and a strong assurance that from their progeny, we may reasonably expect soon to see a list of gooseberries possessing all the good qualities of the foreign sorts; with the added recommendation, that they are perfectly adapted by nature to our climate. When we have these improved sorts, we shall find an extensive use, and enlarged market for the fruit now so little valued.

Careful observation of the result of crop-breeding by artificial fertilization in plants, shows that in every case a really *new individual* appears, in fact a new creation from the hand of the Divine architect, whose thought and power to produce infinite and pleasing variety out of seemingly common material appears; and every time we rely upon Him to give us useful results for our care and labor, he is pleased to respond; slowly perhaps, but really; there being no limit to his resources, there will be no end to the variety, the beauty, the interest, and the improvement which we may reasonably expect. Changes from old forms are sometimes slow, and family traits hard to eradicate, but they will appear in due time if we are wise, patient, and industrious in pursuing our work.

When a man takes *tools* in hand, and attempts to work a plant up to his idea of what it should be, he may partially or wholly succeed in illustrating a human thought, as men do who prune, train, and hedge; but when he goes to the *seed form*, and carefully develops by culture, and by giving favorable conditions to the individuals, which the Creator has designed, he may fairly expect to see developments of beauty and value, as much beyond man's work, as God's thoughts are beyond and above our thoughts.

Rochester, N. Y.

The New American Gooseberry 'Downing.'

The New American Gooseberry 'Downing.'

Public Grounds Especially Adapted to the Culture and Exhibition of Subtropical and Flowering Plants.

BY ROBERT MORRIS COPELAND.

THERE are many opportunities for using tender and subtropical plants where the cost is of little consequence, that is, for the decoration of public grounds. Many persons thinking that trees only are suitable for public places, as they give shade, and are too high to be injured by carelessness or mischief, they would use few shrubs with the trees, and only those that are perfectly hardy. They would plant their trees and shrubs in a very formal way, preferring rows or lines to any groups or irregular combinations. They think that public grounds ought only to be used for play grounds for children, parades for firemen and soldiers, and for promenade. They would permit a music stand, or a fountain, but would prefer to have everything as simple and as little decorated as possible. They believe in this kind of treatment, because they fear that the spirit of mischief will induce the public to break or steal flowering plants, and that the cost of watching, or replacing injured shrubs or flowers, and the vexation that must follow their injury, more than offsets any pleasure they can give. The most of those who reason in this way, do not understand the beauty of variety and irregularity. They are sufficiently cultivated to appreciate neatness, order, and geometrical harmony, and, perhaps, the beauty of contrast, but they do not feel the pleasure which comes from contrasts, and the harmonies which are the result of combining and contrasting trees, shrubs, and flowers, and they cannot be induced to consent to a trial of any methods of laying out, and planting grounds, different from those they have always seen.

Other persons, again, who enjoy thoroughly all the beauty, variety, and picturesqueness of any kind of landscape, and who would consent to any irregularity or massing of plantation, which would give a good effect, are very much opposed to the introduction of flowers, or any of the subtropical plants into public grounds, whether small or large, on general principles. There is a story told of a wealthy parvenu of Boston, who had a poor brother. The rich man gave a party to his peers in wealth, and when one of them asked him during the evening for his brother, and expressed his surprise at not seeing him, the host answered: "Ah, yes, he is not here; I didn't invite him; you know we must draw a line somewhere."

Those who would prevent grouping of trees and shrubs draw their line of ornamental vegetable decoration at perennials and tender plants. They admit that the fears of their conservatories are misplaced, that there is no danger that the public will injure or steal anything, but lest the space may be crowded, the ball and parade grounds be circumscribed, or a larger gardening and police force be necessary, they would omit in public places, all but trees and hardy shrubs, and introduce the latter sparingly. I disagree with them entirely. Public grounds are for the public, and they should appeal to all sides of the mind, and offer opportunities for amusement to those who love flowers, and are too poor, or busy to cultivate them, as much as to boys, firemen, soldiers, and promenaders. If a village or city can afford but one public common, or square, and that too small for anything but a ball or parade ground, I think it should have the preference, and not risk the beauty of

flowers with soldiers and cricket balls. But any city or town which has but one such piece of ground ought, as soon as possible, have another, either large enough for all the purposes for which such grounds are useful, specially devoted to floriculture. Some thoughtful persons believe that the French example has injured even the English practice. Paris, re-made, is full of squares and small parks, which are devoted very much more to floral and shrubby display than to the other public uses, and boys and girls can demurely trundle their hoops, or play at marbles, and well-dressed men and women may stroll leisurely about. In such grounds the boisterous games of children are impossible, and there is no good place for parades of troops, firemen, and other public bodies who are driven into the streets or suburbs. Some of the great English parks in London, where, for years, oaks, beeches and elms have stood on wide lawns, dotted over beautiful meadows, or shading pretty streams and sheets of water, have been affected by the French example, are said to have given too much of their open lawns and meadows to subtropical plants, which require a host of gardeners and a corresponding cost, without a proportionate return in beauty or pleasure. If this is true, it is a pity; but we need not follow a bad example. Let us take as an illustration a square of four or six acres like so many of the squares in Philadelphia, now laid out with a circle round a central flag staff; walks radiating from the center to each corner, or else to the middle of the sides; the radiating paths connected at their extremities, within a few feet of the fence by a broad walk, which is parallel to the boundary all the way round. The sides of all these paths, planted with trees, whether good or bad varieties, is no matter, all is made rectangular, formal, uninteresting, dreary, in summer very shady, almost damp, cheerless in winter, totally devoid of any kind of variety, unless a chance snow or ice storm loads the branches with fleecy beauty for a few hours. This is, in a general way, a description of all the public grounds in America—I mean the small city and town areas. If the space under the trees, and between the walks is wide enough; if the city gardener will permit his perquisite of grass to be trodden down, boys may play on the turf, or troops parade there, but there is no more freedom in such squares than in a school-room. In such a place, shrubs and flowers would be a nuisance, and, indeed, could not live if planted, but the system is entirely wrong. Supposing such a square to be laid out, with strict regard for all public uses, a large unshaded area by itself for a play and parade ground, several smaller spaces for lawns, the trees gathered in the corners into groups, that with shrubs may partly conceal the play grounds, and fringe the lawn, and fill the bends in the paths. In the quieter parts of the square, there might be groups of subtropical or foliage plants, which should come in between the shrubs and the lawn and flower beds. Laid out in this way, all the economical and social necessities of the square would be met, and every one find there the pleasure best suited to his tastes. We need not discuss the advantage or pleasures of flower culture, nor dwell on the humanizing effect on man in all social condition of floral or other beauty; it is admitted, and the only question is: can the pleasure of flowers and decorative plants be enjoyed by the public economically and safely? The safety from plunder and destruction is assured by the experience of European cities, and of New York and Boston. The Central Park has no particular floral treatment, but there are blossoming shrubs in

profusion, and the Boston Public Garden is full of flowers, and no one has been found doing any serious damages as yet, nor will they in the future, if the public is taught to understand that whoever robs or injures the plants and shrubs, is actually doing a greater harm to himself than to any one else. The argument of fair play is more likely to affect a promiscuous crowd than any force. There are always some sneak thieves who will despoil anything, if they can thereby fill their own pockets; but the sneaks are few, and can be soon detected and punished, and every honest person is a policeman who will be eager to preserve public property, just in proportion to its beauty.

The introduction of flowering tender plants into public grounds, will certainly make greenhouses for the winter preservation important, but the cost of greenhouses can well be borne, if we thus secure in every town a place where the winter beauty of plants can be seen and enjoyed, and thus give the people an additional means of enjoyment.

More About the Big Pears.

THE following letter was received a short time after our visit at Mr. Leighton's place, which gives some further description about Mr. Leighton's orchard:

EDITOR HORTICULTURIST: After your departure this afternoon, it occurred to me that in our hasty walk through my orchard that some, or at least one variety was overlooked, and that one was the *Seckel*. It grows much larger here, perhaps, than in any other locality on the Atlantic Coast, and has proved itself healthy as a standard many years with my neighbors, and so far with me both as standard and *dwarf*, is vigorous.

I think I was imprudent in speaking so highly of *Clapp's Favorite*, for I have fruited it only two years as dwarf, and not at all as standard, and do not know when it will come in as standard.

The impression south of me is somewhat unfavorable as to its success, and I would not like to mislead on my slight experience.

I also forgot to speak of the *White Doyenne* (known thirty years ago as Virgalieu in New York), has fruited three years without producing a single cracked specimen.

A pear tree near my barns, and which I remarked, was described in THE HORTICULTURIST, is Poire de l'Assomption; but I was mistaken, it is described in *Tilton's Journal of Horticulture*, and the pear trees shown you as Souvenin du Congress. I refer you to vol. 24, No. 278, page 235, HORTICULTURIST.

I enclose a short article which I wrote a year ago for the *Southern Planter and Farmer*, in answer to the numerous questions asked about my method of raising such large pears:

I plant my dwarf trees twelve and a half feet apart each way (perhaps 12½ by 14 feet would be better for Duchesse d'Angouleme), digging my holes about three and a half feet square and three feet deep. My land is overlaid with stiff blue clay from three to seven feet in depth, under which is sand.

In order to make underdrainage perfect, I bore with a post auger a hole from the center of the three feet hole down to the sand, and fill said auger hole with oyster shells, adding about a bushel in the bottom of large hole. I then add about six

inches of finely cut brush (hard wood), then fill up the holes with top soil mixed with a compost of muck, woods earth and lime—say six parts of the first, five of the second, and one of the latter. Should the muck be fresh I would add one-half part of salt. I regard the salt as indispensable. There is much of truth in that old Scotch saying, that "muck is the mother of the meal chest."

I find the above compost excellent for clover as well as pears.

In planting my trees I endeavor to have the bunch at the joining of the pear with the quince about two inches below the level of the ground.

No crops are allowed among my pear trees excepting occasionally the black pea, which I plant as a fertilizer; and even when I plant these, I adopt the clean culture system until the first of June.

Few persons are aware of the sensitiveness of the pear tree, of its prompt response to generous treatment, or its pining at neglect.

Of all the pear food robbers, I place strawberries at the head of the list.

Persons who have not the courage and disposition to spare the land and keep it thoroughly cultivated, should not embark in the business of pear culture, for loss and disappointment only await them.

I have avoided barn-yard manure among my trees, either in planting or after culture.

Finding the trees so healthy and vigorous under the treatment of the compost first named, that I shall not make any change excepting when the trees come into full bearing, when I shall add bone and ashes for fruit food.

In short, the following are requisites for successful pear culture in Eastern Virginia:

1st. Perfect drainage.

2d. Stiffest clay soil.

3d. Proper planting of the trees.

4th. Clean culture.

5th. Healthy trees (which can be had of responsible nurserymen direct, without the intervention of an agent, and imparting the satisfaction of having every tree true to name).

6th. Timely supply of proper food for growth of both wood and fruit.

7th. Determination, patience, and sufficient of the sacrificing spirit to remove all fruit until the tree has sufficient wood to sustain it without checking the wood growth.

8th. Judicious pruning (better none than too much).

9th. Careful picking, packing, and handling of the packages.

10th. The right kind of an agent to dispose of them.

Norfolk, Va. G. F. B. Leighton.

Sequel to my Service Tree.

ENCLOSED I send you a few autumnal leaves from my Service Tree. Although confined to a sick room now for a few days, these leaves look so beautiful to my eyes, that I could not forbear stepping on to my front stoop, and stretch out my hand and pluck them for you. If your wife, or any lady friends, want patterns for artificials, to trim a winter hat, I commend these leaves, especially their exquisitely rich colors.

S. Foster.

The Horticulturist.

THE October number of THE HORTICULTURIST is this day received, and its contents glanced at, which appear full of valuable instruction; its field is broad and open, its success is sure while thus conducted, and I trust will prove profitable to both publisher and readers.

Our pear crop is harvested, quite light; grapes all gathered, below medium in quantity, but above in quality; apple picking brisk, crop a good one, far above average, except in the North part of the State; and instead of 106, as Agricultural Department had it for July, I would now put it 112. S. FOSTER.

Violets.

BY ROBERT J. HALLIDAY, BALTIMORE, MD.

HAVING been asked to reply through your columns which is the best violet and our manner of growing the same, I respond as follows:

We have grown them profitably for the past fifteen years for their bloom. We plant in cold frames of well prepared soil about the end of September, say two thousand plants, these commence flowering two weeks after removal; from the 1st of November to the 1st of February, we pluck from fifteen hundred to two thousand daily. After this the sun becomes stronger, and they flower more abundantly, until about the 1st of April, when they cease. The sash are then removed to allow the plants to grow and harden before we separate them; about the 1st of May we take the old plants up and divide them, making say from ten to fifteen out of each, or as many as we can get with good crowns and roots—tops and roots cut back like strawberries, and then planted in open field in good rich soil.

Start your plants early in spring, so that they may be well established before the summer droughts commence. Artificial heat is not required to bloom the violet; bank your frames well with leaves or manure, cover early in the afternoon in severe weather with mats, salt hay, etc. Here is where so many fail in growing them; they do not keep them warm enough at night.

Best Violet for Forcing for Winter Bloom.

We have always considered the old *Neapolitan*, the best and most profitable for flowers until this season; color blue double, very fragrant and profuse flowerer.

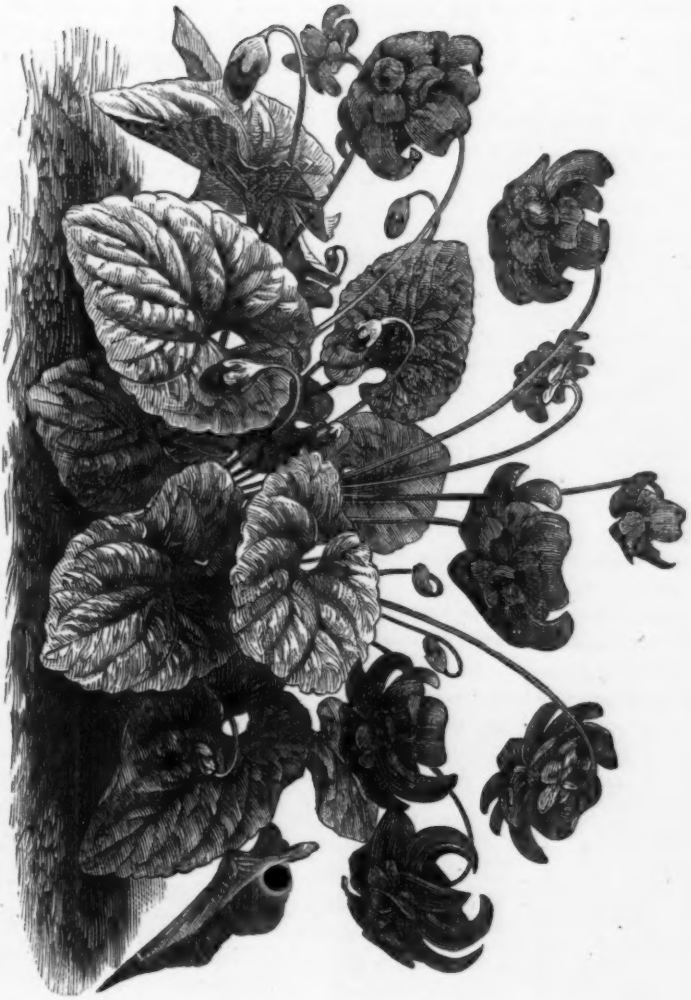
Maria Louise—This new variety we have had for the past twelve months, but never fully tested until the present season. It surpasses all others, equally as fragrant as the former variety; color rich, deep, bluish violet, often with a red streak through center of flower—for the cut flower trade it has no equal. Six flowers of this variety will go as far in the making up of a bouquet as fifteen of the Neapolitans. We have them flowering now in great perfection. The runners of this variety flower abundantly, and should never be cut off, as they are in other varieties.

Czar Violet—Have never grown it extensively, color too dark, and flower single, which are both against it for the flower trade.

Neapolitan Alba—(Double white) poor flowerer.

King of Violets—Double large, deep blue.

Shoenbrun—Single blue, very profuse.



New Violet. Marie Louise.

Experimental Strawberry Garden.

EDITOR HORTICULTURIST: In the last two years I have collected and planted at "Woodburn Farm" (near Columbus, Ohio), some fifty of the newer varieties of strawberries, chiefly for the purpose of testing their value as to growth, hardiness and prolificacy in the soil and climate of that region. Some of them are well known in many sections, others are new American seedlings, and a few are recent importations from abroad by the Agricultural Department, whence I obtained them. They were all planted two feet apart, in rows four feet asunder, so as to permit of horse cultivation, and they have been kept reasonably clean and runners cut by running a small plow occasionally between the rows. The soil is clay-loam, surface-drained. Last December the rows were all covered with straw, as a winter protection, but I have not been able to perceive any special benefit from this much vaunted but somewhat troublesome operation. Some of the varieties were found to be entirely frozen out, while others were but slightly injured. Again, in the case of some varieties where the straw had been blown off in places, the exposed plants seemed to be in about as good condition as those which remained covered. On the whole, I am inclined to doubt the correctness of the popular theory of strawberry "mulching," or covering, and have found it, in the growing season, especially, a decided nuisance, for weeds and grass will grow up through it inevitably, and cannot be destroyed until the straw is entirely removed from both rows and spaces.

Very respectfully, F. A. SIMPKINS.

List of Varieties.

Agriculturist, moderately thrifty, no runners.

Abraham Lincoln, totally destroyed.

Ballard's Seedling, robust growth, shy bearer.

Boyden's 30, splendid grower, fair bearer.

British Queen, fine foliage, has not borne.

Burr's Pine, fair grower, superior flavor.

Belle Bordelais, thrifty, except where trampled.

Caliope, good growth, poor bearer.

Champion, died out, complete failure.

Chas. Downing, moderate, healthy grower.

Colfax, immense foliage, small fruit.

Coppick, hardy, new, promises well.

Department Seedlings, 1 *to* 9, No. 3 best grower.

Durand's Seedling, splendid grower, very hardy.

Globe, much injured by cold.

Gloede's Pine, good growth, poor bearer.

Golden Seeded, moderately thrifty.

Green Prolific, first-rate growth, *not* prolific.

Gen. Sherman, inferior, not desirable.

Halleck's Prolific, thrifty, poor and small.

Haquin, new, badly winter-killed.

Higley's Everbearing, thrifty, ripens regularly.

Hovey's Seedling, fair grower, fine flavor.

Jucunda, vigorous, fruit not large.

Lady of the Lake, strong grower, moderate bearer.

Laurella, strong grower, barren thus far.

Leeds' Prolific, moderately vigorous, fruit small.

Lennig's White, strong growth, superior flavor.

Matilda, new, promises well as to growth.

Naomi, vivid green, very vigorous.

Napoleon III, winter-killed, utterly destroyed.

Negro, strong grower, much like Wilson.
Nicanor, partially winter-killed.
Paxton, hardy, fine handsome growth.
Peake's Emperor, magnificently green.
Philadelphia, moderate grower, sure bearer.
Prince of Wales, badly injured by cold.
Reed's Pine, good, hardy grower, very late.
Romeyn's Seedling, fair grower, leaves brown-specked.
Triomphe de Gand, moderately vigorous, healthy.
Trollop's Victoria, fair growth, brownish foliage.
Washington (*Iowa*), persistent grower and runner.
Wilder, new, vigorous and healthy growth.
Wilson, of course, great grower and bearer.

Amaranthus Salicifolius.

WITH us the past summer it has been all that was promised, and more too, which is rarely the case with those high-flown English descriptions. The plants grow very rapidly, and attain a height of nearly eight feet, sometimes even ten. The habit of the plant is all that can be desired, being very graceful in habit, and resembling a Weeping Willow, which has obtained for it the name of "Willow-Leaved Amaranth." The color of the leaves is a bronze green, which changes to a bright carmine color, about the middle of August, on all the ends of the branches, making plumes of such dazzling beauty as to be truly magnificent. The plants are rather delicate when first planted, and should not be set out before the first of May. As they grow they are benefited by being staked, as they are liable to be broken by high winds in the fall. They do best in a moderate garden soil. A few plants we have had on our place this summer, have been the admiration of all who beheld them. It has proved to be a decided acquisition, and coming in a time when that class of plants are in demand, is just the right thing in the right place.

Tarrytown, N. Y. FRANK ROMER.

The Clematis.

EDITOR HORTICULTURIST: Your note requesting information regarding the new varieties of Clematis came to hand sometime since, and I refrained from replying until I could furnish a reliable opinion.

Last spring I imported Clematis *Rubella*, *Prince of Wales*, and *Lady Bovill*. These varieties were recommended in the English journals as something distinct and more than worthy of cultivation. During the past season these new varieties were thoroughly tested, and I can only say this, that I am disappointed.

After having carefully tested a large number of varieties, I would advise the readers of THE HORTICULTURIST to plant Clematis *Standishii*, Clematis *Rubro-violacea*, Clematis *Jackmanii*, Clematis *Azurea-grandiflora*.

In a former communication I referred to the Clematis as a bedding plant, and can only say, that after one season's experience they have given me entire satisfaction.

AL FRESCO.

Plants with Variegated Foliage.

By Edgar Sanders, in The Prairie Farmer.

QUITE a good deal can be done with variegated foliage plants to help give character and tone to a place, even when flowers are not very plenty. This is particularly the case with plants in a greenhouse, and even in a window, although to a smaller extent, of course.

We doubt very much whether the variegation in foliage comes nearly so beautiful in its markings here, as it does in a moist climate like that of England, where the rays of the sun are less powerful. Still, many kinds do well enough to be quite effective when properly grouped or used.

That the rich markings observable in England, of the Zonale Pelargonium tribe, when planted in the flower garden, is pretty much a failure, we are now quite convinced, although really sorry it is so, for they are equal to a bed of flowers where they do well; the tri-color section will never be a favorite bedder with us on account of this failure.

Even the old common variegation of white and green does but indifferently well, as compared to what one sees on the other side of the Atlantic. So beautiful and so entirely effective are they there, that they and the tri-colors, at once assume the most commanding position as bedding plants, over all other kinds. Without having seen them as they appear there, it is impossible to realize what a beautiful effect they produce.

Variegation is, undoubtedly, a species of disease, and more or less affects the vitality of the plant, which, we suppose, is one reason why these plants do not stand our hot suns in summer better than they do.

It would be an interesting question, however, to enquire whether plants produced on this continent would stand any better than such as have had a European origin.

We have one in our mind's eye, raised by R. Buist, of Philadelphia, that does admirably well, and that is the variegated Rose of Sharon, called, we think, Buistii.

This plant, readily raised from cuttings of the last year's wood, taken off in the fall, could be made great use of, even as a bedding plant, although really a shrub, but by no means a strong grower, however, being a good illustration of how much the variegation seems to retard the growth of most plants so marked.

Among the plants now being occasionally offered for sale, with variegation, are the following, all of which we take from one Eastern catalogue, showing that this class of plants is really being more sought after than formerly.

To the novice in plant-growing, variegation does seem to strike favorably, as it is quite frequent to hear the remark that such and such a plant looks sick, whereas to the plant connoisseur, the same may be thought exceedingly beautiful:

Cobea Scandens variegata—Leaves green, margined with yellowish white.

Linaria Cymbalaria variegata—A very interesting variety of the ordinary toad-flax, with leaves one-half their depth, marked with sulphur white; quite a weakly grower, however.

Basella rubra variegata—A species of the well known Madeira vine—leaves scarlet, green and white—of a half shrubby state. said to stand our suns well.

Antirrhinum (Silver Belt)—A prettily marked variety of the common Snapdragon of the gardens, but quite a diminutive plant, however, as compared with the green varieties.

THE WESTERN HORTICULTURIST
MARK MILLER EDITOR DES MOINES, IOWA

Training Peach Trees.

BY DR. WLILIAM M. HOWSLEY, LEAVENWORTH, KAN.

PEACH trees should be, in our opinion, trained in the fan form, making the trunks not more than *half boot-leg high*. If trained in long trunks the fruit will, in a few years, be almost or quite out of reach for gathering. As the tree advances in age, it also advances in height, shedding the lower limbs and making its new bearing wood higher up from the ground. Thus the fruit, when the tree bears, becomes very difficult to gather, in consequence of its extreme height; the weight of the fruit also being thrown so far from the body, endangers the destruction of the tree by the weight being so far from the trunk.

Hence to have a successful peach orchard, where the soil, the climate and the altitude are favorable to the production of this fruit, trees should not only be trained low, at the start, but should be kept low by annually cutting back the young bearing wood. This will keep the fruit easy of access at gathering time, prolong the life of the tree; will prevent the usual amount of shedding of the lower limbs, and increase the vigor of the fruit buds which lie between where the cutting back is done and the last year's growth. The fruit is thus kept in convenient distance of the ground for gathering, the fruit buds are better able to withstand the extremes of cold in the winter, are rendered more certain to bloom in the spring, are better able to withstand late spring frosts, and the life of the trees is prolonged. Upon the subject of shortening in the annual growth of the bearing wood, there is some difference of opinion among pomologists as to the time of doing it, some preferring late fall, others late winter or early spring, and others early fall, or so soon as the fruit is matured and gathered. We indorse the latter opinion, for the following reasons: first, it prevents, if not done too soon, the further extension and growth of young wood for the season, husbands all the sap which would have otherwise been expended for this purpose, and applies it to the increased vitality of the fruiting buds for the coming crop. If the above system is strictly carried out, together with the instructions heretofore given upon the culture of the peach, we have no hesitation in saying that this delicious fruit can be made quite a sure crop.

For the destruction of the grub, which is sometimes quite destructive to peach trees, an annual application of hot water, or a mound of leached ashes kept around the trunk at the root, will in almost every case be successful. Where either or both of these should fail, the use of the hand and knife will do the work effectually.

The Flowering of the Fig.

TO the uneducated eye the fig is a wonder. The fruit seems to come out in the place where the flowers ought to be; and the appearance is that there are no flowers before the fruit, as there is in other plants. It was the habit in past ages to attribute something miraculous to every appearance out of the ordinary course of nature, and to take the occasion to connect these marvelous appearances with some individual whom they wished the world to venerate and esteem. So this fig tree marvel came to be associated with the flight of Mary into Egypt with the infant Jesus.

The Spaniards tell us that in her flight she sheltered herself under a fig tree. In recompense for the security afforded, she blessed the tree, and bestowed upon it marvelous power. It produces two crops a year, and this is one of the blessings then conferred. But in order that the tree might be fertilized—for even in those days it was known that flowers were of two sexes—the tree put forth, by her command, one magnificent white flower of rare beauty. It was pure white and shot forth rays of phosphorescent loveliness. This fructifies the whole tree, and renders any other flower unnecessary.

This flowering still continues every year on one night only—St. John's night. It opens for a few minutes at midnight, and whoever could see or secure this flower, at the expense of the whole future of fig culture, would possess himself of a charm which would enable him to procure anything he might desire in this world.

The Virgin Mary, knowing this, caused the fig, for this evening of its flowering, to be guarded by all kinds of horrible things. There are snakes, lizards, bloated toads, birds of ill omen, wild beasts and venomous reptiles of every description, so that no one has ever been able to get near enough to see this miraculous and wonderful flower.

The story is firmly believed in by all those old Latin races, whose chance for life is cast in those regions where the fig-tree dwells; and has always been a sufficient reason to them why the fig-tree has never any flower, as they think.

What a pity it is that the cold hand of science is so ever ready to crush to death all these beautiful stories. It tells us, in spite of these lovely traditions of ages past, that the fig has flowers like unto any other plant, but the flowers are inside what we call the fruit. All flowers rest on something.

Take the apple for instance. The lowest are set on small globular productions. The floral parts, the stamens, rise out of the center of the globe; and after they die away this globe swells and becomes the apple which we eat. The fig is formed pretty much in the same way.

The little globe which we see pushing from the axle of the leaf, and which afterwards becomes the fruit, is filled with floral parts, just as we see in the apple; but these parts never project up the center so as to be seen by vulgar eyes. There is a small orifice at the apex through which the pollen is drawn, and that is all that is known to any one except of the more curious class.

The curiosity is rewarded, on breaking open a young flower, by finding it filled

with a pink, spongy substance; each of the little projections composing it being found by a small pocket lens to be a small flower. Thus the mystery ceases. The fig is really a little community in which hundreds of individual flowers dwell, and thus ends in hard cold facts the mystery of the Virgin and fig-tree.—*Selected.*

Is the Apple Crop a Failure?

EDITOR WESTERN HORTICULTURIST: With the greatest profusion of flowers, and the finest prospect for a large crop of apples last spring, we are now compelled to believe that the crop will be small in quantity, and poor in quality. There is a general complaint of the imperfection of the fruit. The ground is covered with apples, and those still remaining on the tree are defective. The tree appears to be affected as well as the fruit. Severe droughts, and hard winters (or something else) are killing many outright, and rendering others feeble and sickly. The curculio attacks the apple as well as the peach and the plum. So that no matter how fair in appearance, or how rough and scabby, almost every specimen has a worm in it. This comparative failure appears to be wide-spread and general—not confined to any one locality, or to any particular variety. Young, thrifty, and healthy looking trees seem to suffer as bad as older ones. The borer at the root, and twig blight at the top will soon destroy many fair specimens of choice bearing apple trees. The commercial value of a good apple crop may be estimated by millions of dollars, while the domestic value is above all price. What is to be done? Are these ravages beyond the control of man? The remedies proposed are numerous and varied, but practically inefficient. The theories of a man who signally fails in practice are worthless.

Nauvoo, Illinois. C. BRADLEY.

Miller's Daily Raspberry.

LAST spring a year, we received from W. B. Lipsey, of Marion, Ind., a half dozen raspberry plants labelled as above. It belongs to the Black Cap family, made a good growth the first season, and produced a liberal crop the second for yearling plants. He found the fruit quite as large as Mammoth Cluster, and of higher quality than the Mammoth or Doolittle. Not having received anything from Mr. Lipsey, concerning it, or any allusion to it from any other quarter, we have asked Mr. Lipsey what he knows about it, and he replies:

"Two years ago last May (1870), I received a few plants from an old friend in in Southern Ohio, by the name of Isaac Miller, who informed me that he found the original plant growing wild by the side of an old stump in one of his fields, and from which he made a start. With me it gives better satisfaction than any other variety out of a dozen or more on my grounds. It is as hardy as Doolittle or any other variety."

Notes on Pears for 1872.

BY ISAAC BRANDT, DES MOINES, IOWA.

ED. WESTERN HORTICULTURIST: I hand you brief notes on such pears as I have fruited the past season.

Madeleine—Fruited well, was ripe July 25, twenty days later than last year; tree a slow grower, but profuse bearer; fruit of the best quality of the early variety.

Bloodgood—Shy bearer; fruit ripens August 1st; tree good shape and hardy; fruit good.

Dearborn Seedling—Is my favorite summer pear; tree a vigorous, upright grower; fruits young and abundantly; very fine flavor; only objection, size of fruit, being very small; ripened August 15th.

Clapp's Favorite—Tree a fair grower; abundant bearer, and good quality; fruit ripe August 20th.

Tyson—Fine, erect tree; slow to fruit, but very good; ripened August 20th.

Flemish Beauty—The old mother of them all for vigor of tree, quantity and size of fruit; ripened September 10th.

Bartlett—Quite full; pears small but very fine in flavor; ripened September 15th.

Beurre d'Anjou—A solid tree; shy bearer, but of good quality in size and flavor.

Belle Lucrative—Tree fine, erect grower; wonderful bearer, but in my estimation the fruit is poor in quality, small and tough.

Belle Superfin—Its name indicates it; a good tree, fruits well and of good quality.

Golden Beurre—A fine tree; fruits early and of the first quality.

Dutchesse d'Angouleme—A hardy, solid tree; fruits early, and the fruit one among the best of large pears.

Sheldon—The very best of hardy, fine trees; shy bearer but of good quality.

Beurre Clairgeau—A fine looking tree; bears well, but the fruit is the poorest o. all my pears.

St. Lawrence—A good winter pear; tree fruits well and is of fine flavor.

Buffum—Tree did not do so well; it was badly blighted two years ago and seems diseased ever since; the fruit was small and knotty; ripened September 15th.

Seckel—A slow, upright, solid grower; fruit first rate; rather a shy bearer.

White Doyenne—Tree a fair specimen of good trees; fruit first rate; bore well, and excellent in quality.

Osband's Summer—Tree a fine erect grower, very similar to the Seckel; a shy bearer; fruit first rate.

Napoleon—Tree rather inclined to blight; the wood seems loose and spongy; fruits were very good for size, but I do not admire their flavor.

Beurre Bosc—A fair grower; fruits well, and good in quality.

Onondaga—Is also a fair, good shaped tree; fruits well, and of good quality.

Stevens' Genesee—A fine, hardy tree; fruits well, and one of the very best of fall pears.

What Shall be Done with Old Apple Trees.

BY WM. H. YEOMANS, COLUMBIA, CT.

EDITOR WESTERN HORTICULTURIST: In all of the older portions of our country are to be seen many old orchards of apple trees, that are in a dilapidated condition, and hence the question naturally arises as to the disposition to be made of them. In some cases the attempt has been made to rejuvenate these, by means of a systematic pruning, followed by a cultivation of the field for a short time, with the view of giving new life and vigor to the tree, in the hope that thereby a new lease of fruitage may be gained.

May it not be supposed that the apple tree, like all other natural objects, continue to grow to maturity, which, having attained, must of necessity pass to the decline of life; also that as it requires, according to analysis, large quantities of potash, soda, and carbonic and phosphoric acids, in order to insure a full development of the fruit, if these are not restored by a systematic fertilization, the soil will be greatly exhausted of these elements, and so unable to grow fruit to any perfection, and as another effect, the tree must feel this want of natural sustenance, and so be hastened in its journey to decay? And when this is once commenced it is "love's labor lost" to attempt any permanent restoration. This is one apparent cause of the decline and feeble condition of so many orchards. While it is by no means agreeable to attempt the cultivation of such fields, there are ways and means by which this may be accomplished, such as pasturage by swine, the spreading of ashes, salt, and other manurial substances. Now although there are many who favor the attempt to restore old trees, it is very evident that it cannot be accomplished with any hope of success, for if the seeds of decay are once planted in the parent stem, this must, in a certain measure, be imparted to every part, as is seen in the want of vigor and fruitfulness of the tree; then if felt in the growth of the branches, it must extend to the perfection of the fruit, which will be found to be sadly wanting. This being the case, how much better for the farmer to secure some favorable locality, and therein plant an orchard which shall be full of vigor, being on an unexhausted soil, and which, by proper care, will survive for years, furnishing valuable and perfectly developed fruit, and hew down the old orchard, "and cast it into the fire," that it may give room to a more desirable, and less unsightly production. The attempt to preserve the old trees that have passed their prime, and the reproduction therefrom, by means of grafting, is one great cause of the decline of some of the old established varieties, which are rapidly giving way to those of modern time, and which give promise of better success in their cultivation; because if the proposition that "like produces like" is true, a tree grafted from one past its prime will never develop so perfect specimens of fruit, as from one full of thrift and vigor, so that fruit, like all other vegetable productions, must be reproduced from seed in order to maintain a good degree of strength of growth, and productiveness of fruit; and the more this is practiced, the better it will be for the fruit raiser.

Influences of Temperature.

ED. WESTERN HORTICULTURIST: Ordinary thermometers indicate the temperature *only* at the instant of observation. Unless observed constantly the *duration* of any degree of temperature is not shown. Practically, *duration* is a very important matter in determining influences of temperature. Suppose that a hot-house is to be managed, or nursery stock to be moved. The thermometer may indicate 10° on the morning of any day about the middle of October, and endure at that for only three or four hours. Less damage would be done to living plants than when, two weeks later, the mercury shows 15° or 20°, but remains at that for two days. In the latter case the earth and plants become cooled so as to be constantly freezing; in the former case the latent heat would not all be taken from the ground to permit freezing so soon. The earth in the first instance would not freeze so as to injure potatoes, flower-roots, etc., when in the latter case they would be entirely destroyed.

Extremes, not means, are the practical features of climate. The fact that the average temperature of May is 50° is not so important a fact to horticulturists as that the cold of May is 25° often as late as the 25th of the month. The probability of excessive heat or untimely frosts must modify the action of gardeners, florists and farmers in planting, and nurserymen in the moving of articles liable to injury by extremes of temperature.

In view of these and kindred facts we would suggest to scientists the desirability of a self-registering thermometer, one that will show the temperature at any and all times, in all its fluctuations, variations and extremes. Is not such an instrument practical?

Ithaca, Wis. A. L. HATCH.

Forests and Rainfall.

IN the November number of the HORTICULTURIST, page 338, Dr. Housley refers to the fact of an abundance of rain in the timbered regions of the Rocky Mountains, while east of there, on the great plains, very little rain falls, and there is no timber; *hence the inference that timber is the cause of rain.* I would infer that *rain is the cause of timber.*

I do not think it necessary to go into an argument to support such a theory, but simply state this as being the more rational conclusion. I would advise, and most earnestly advise, the planting of trees for effects which we are certain of, such as wind-breaks, use of timber and wood, ornament, modifying the rigor of the climate, both summer and winter. Statistics of the quantity of rain in the early settlement of our forest country, and after it had become cleared of its forests, would be more conclusive than many suppositions which we often see.

Muscatine, Iowa. SUEL FOSTER.

Editorial Notes.

Death of J. Knox.

We regret to announce the death of Rev. J. Knox, of Pittsburg, Pa., which occurred in Pittsburg, 13th last November. It was only a short time before his death when we met him, and had several personal chats with him upon horticultural subjects. He seemed an example of perfect health, and the news of his sudden death, by apoplexy, was startling to all friends and acquaintances. Perhaps no man has done more for the culture of small fruits in America, than Mr Knox. Well known as the *Strawberry King*, he fully demonstrated the possibility of attaining extraordinary success in his own grounds, and introduced thousands of vines of strawberries and small fruits in the home gardens of families everywhere. We had met him in Pittsburg, Cincinnati, and Philadelphia, quite frequently the past two years, and since he had given up the care of his grounds, and left them to his successors, R. Cumming & Co., he felt freed from pecuniary cares and anxieties, and more at liberty to travel, and peruse horticultural literature. He had upon his mind the idea of writing a new volume on Small Fruit Culture, better than any now existing, and, undoubtedly, if he had lived, it would have been attempted; but he often said in response to our urgent request to have it published soon: "I can't be in a hurry; when *Knox* writes, it must be *the best*." He had done good in many other ways as a clergyman, and leaves behind a name full of honor.

The Steadly Peach.

S. Miller, of Bluffton, Mo., describes a new peach in the *Rural World* of October 12th: "It is evidently a seedling of La Grange, which it much favors, yet is ten days later, larger, and I really think better."

The Vienna Exposition.

The arrangements made and making seem to point to a success greater at Vienna than at the previous Exposition in Paris. Probably no pleasanter journey, next summer, can be taken by an American tourist than to Vienna, for, undoubtedly, there will be a vast amount of material gathered from all parts of the world.

Special attention has been paid to the horticultural department, and some think it will be the most noteworthy horticultural exhibition ever known in Europe. There are twenty-four groups of plants of all descriptions, arranged both botanically, and also for practical or medicinal uses; and in the division for greenhouse plants, there are places for new plants by themselves, plants needing high culture, plants of ornamental habit, plants of singular form, alpine plants, climbers, plants for room decorations, window gardens, weeping trees, trees with colored leaves, plants for vases, etc., etc. There is enough at once to bewilder, amuse, and instruct.

Western New York Horticultural Society.

The next annual meeting will be held the 8th and 9th of January, at Geneva, N. Y. It will be very interesting, as many valuable subjects are to be discussed.

Hardy Shrubs.

E. R. McKinney, of Lacon, Ill., writes to inquire if the following list of ornamental plants is hardy:

Golden Yew, Chinese Cypress (*Glyptostrobus, Sinenris*), Weeping Birch, Weeping Sophora, Stuartia, Kolreuteria, Salisburia, Japan Hydrangea, Viburnum Plicatum, Magnolia conspicua, Magnolia gracilis, Magnolia cordata, Magnolia macrophylla, Magnolia glauca, Azaleas (name three best), Rhododendrons (name three best).

The letter was referred to S. B. Parsons, of Flushing, who responds with the information, that "the trees and shrubs named are all perfectly hardy, and are among the finest plants we know."

The three best Azaleas are *Aurantiaca, Beaute de Flanders*, and *Honneur de la Belgique.*

The three best Rhododendrons—*Album elegans, Roseum elegans*, and *Lee*, dark purple.

A New Squash.

We received early in December a specimen squash from J. J. H. Gregory, of Marblehead, Mass., which has been named *The Marblehead.* Mr. Gregory finds from his tests, that "it has a more flinty shell than the Hubbard, is of a different color and shape, being flatter on the stem end. It has a greater specific gravity; it combines sweetness and dryness more, and keeps longer than the Hubbard. A capital characteristic is its purity, being perfectly free from any admixture with any other sort. In size and yield it resembles the Hubbard." Mr. Gregory, in a letter to us, states that since he introduced the Hubbard, he has tested scores of varieties, sent him from every quarter of the globe, and all the United States, and of them all has found but one other besides this, worthy of an extensive introduction, or addition to our standard sorts. It is remarkable, especially for its purity, being the purest squash he ever grew.

The specimen we received was examined, and fully justifies the description of Mr. Gregory, and we advise its introduction.

American Pomological Society.

Marshall P. Wilder, the President of American Pomological Society, writes us that the date of the next meeting—the quarter centennial of the Society—has been fixed for September 10th to 12th next, in Boston, at the Horticultural Hall. He further adds: "Although our princely stores are in ruins, yet we will, as of old, welcome all the lovers of horticulture, and old time friends, with the kindest of attention and hospitality."

Change of Firm.

C. L. Allen has retired from the seed business of the firm of C. L. Allen & Co., located at 76 Fulton street, Brooklyn, N. Y., and is now engaged only as a *grower* of bulbs, plants, and seeds upon his farm, at Queens, L. I.

He is succeeded by Moses S. Beach & Son, who still continue the firm name of of C. L. Allen & Co., at the same place in Brooklyn.

Vick's New Catalogue.

It is much the handsomest of American catalogues yet issued, and is hereafter to be issued quarterly.

Rosebuds.

Mr. Henderson says that the kinds mostly grown in green-houses, are "*Bon Silene* (carmine purple), and *Saffrano* (orange yellow). The Saffrano is popularly known as *the* Tea Rose, the *Marechal Niel* (golden yellow), and the *Lamarque* (white) are grown, but not so extensively as the *Tea* varieties, as they require greater age before they begin to flower, and being climbers, flower best when trained to trellis work.

The Window Gardener.

Several journals have already taken notice of this curious piece of book making. Out of 132 pages, 118 are old matter, being merely the plates of an old volume (*Flowers for the Parlor and Garden*, by E. S. Rand, Jr.), and republished with only a few additional pages as a *new volume*, with a new title. We need merely repeat here, that the entire book trade have expressed in the most severe denunciatory terms, their disapprobation of such a scandalous course, alike injurious to author and publisher. The book has been severely criticised by *The Agriculturist*, *Hearth and Home*, and is to be still more severely handled by other journals, who have it in hand, for scathing notices. It is a most unfortunate thing for Mr. Rand, if he *is* responsible for its *re-issue*; and again, if *not* responsible, his authority and control as to the copyright, was sufficient to prevent its appearance. Among New York book publishers, it is considered a dodge, to attempt to gain some advantage from the popularity of *Window Gardening*, and "shove" this book upon unsuspecting persons. We do not express any opinion ourselves, but merely report what we have heard said, only adding that we have not told one-half. Were it a *new* book by Mr. Rand, none would be more cordial toward it than ourselves.

Young's New Golden Chinese Juniper.

This novelty, lately originated in England, is an almost exact counterpart of its parent, the Chinese Juniper, except in color. *The Garden* considers this color equal in richness of hue, to that of any golden Conifer hitherto known. The variegation is permanent and thorough. The plants are described as having a close pyramidal habit, and have the two kinds of foliage, which is characteristic of the parent, while the color on the more prominent portions of the plants is as bright as the tint of a Golden Holly. It is considered to be one of the most valuable variegated subjects ever sent out.

The Weeping Larch.

An English gardener, writing to *The Garden*, thinks it is "one of the most elegant of all our hardy deciduous trees, and very rare as a large tree. The specimen growing in my gardens, densely covers a walk 10 feet wide for a distance of 130 feet, its side branches spreading full 15 feet on each side down to the ground. It is of so recumbent a form of growth, that a very powerful support to the branches is necessary to allow of sufficient height for walking underneath. Some few years ago, a double row of polished oak posts, 8 feet high, was erected under it on each side of the walks, with iron posts just under the stem and main branches, and cross-bearers at intervals, to support the lateral branches, which have covered the whole structure so effectually, that the sun's rays cannot penetrate it. The branches grow perfectly flat on the trellis, requiring no training, and there is not one on the whole tree rising to a greater height than 15 feet. I have seen *Larix pendula* mentioned in Nursery Catalogues, as growing from 30 to 50 feet high. Possibly this may be a distinct variety."

A Cheap Canning Apparatus.

Mr. F. J. Parks, of South Haven, Mich., built a small canning establishment the past season, at a cost of only $300, in which they put up 1,500 cans per day, at an expense of only $30, exclusive of the cans. The fruit was put up by application of steam, a very simple process.

A Profitable Cranberry Crop.

Three thousand bushels were recently picked from 3¾ acres of land near Berlin, Wis. From 40 acres on the Carey Marsh, 3,200 barrels were picked, worth $3 per bushel. The Carey Brothers employ 1,400 hands this season in picking. The daily picking by hand is one to five bushels. Price paid 75 cents per bushel. One week's picking among Berlin laborers amounted to $25,000.

A New Gladiolus.

The John Standish Gladiolus, just introduced, has flesh colored flowers, marked with crimson and purple, forming a magnificent spike.

The Honeysuckle as a Standard.

A writer in *The Villa Gardener* thinks that the Honeysuckle is one of the most *regularly flowered* climbers in cultivation, taking rank for effect, and surpassing in many points—odor for instance—even the gorgeously colored *clematises*, which are in every modern garden. As a standard, the Honeysuckle merits the very foremost place in our villa gardens. "We have seen it with thousands of flower umbels in pale yellow and pale pink, decorating villa grounds in a way that no single plant in the month of July can do."

It is scarcely possible, in words, to portray its extreme beauty and effectiveness. Buy a plant of it (cost not 50 cents), train or tie it to a stout stake, as one would do a standard rose; prune it not too severely, but in the way a Hybrid China Rose ought to be done; give it a good soil to grow in, and it needs no further attention. It will grow into a plant that will astonish, by its flowering capacity, thousands and tens of thousands who have not seen it so trained.

Flowers in New York.

At Christmas, New Years, and Easter, there is fairly a rage for flowers of every description. Prices then rise to very high figures, such as Camellias, $50 per 100; Tuberoses, $10 per 100, and Rosebuds, $5 to $8. These are trade rates. Consumers have to pay higher—Camellias, $1 each; Roses, 25 cents; Tuberoses, 25 cents; Carnations, 15 cents; Violets, 4 cents. When the holidays are past, and the fever is over, Camellias fall to $6 per 100; Carnations, $1; Roses, $2 to $3, and all others in proportion.

Pennsylvania Fruit Growers' Society.

The fourteenth annual meeting of this society will be held this time at Reading, about twenty miles from Philadelphia, commencing January 15th, 1873. Some important features are introduced for the first time in this society. Usually much time is lost in preparing business. Here it is all prepared beforehand, and people can come prepared to discuss them, while under the head of new business, any subject not on the programme can be introduced at the option of members present. Among the subjects in order, we note the hedge question, line of planting trees, preparing ground for orchards, profitable management of orchards, manures, new varieties, philosophy of plant life, the whole grape question, the interests of fruit growers, beautifying of grounds, manufacture of fertilizers, ripening and preserving pears, underdraining, weeds and weed laws, sheltering orchards, and so forth. Members are selected to open these questions by a *short* address. Among the names announced for addresses are those of H. Bartram, Wm. Parry, H. T. Williams, S. W. Noble, Wm. Saunders, Charles H. Miller, A. S. Fuller, F. F. Mereeron, J. S. Stauffer, Tobias Martin, T. M. Harvey, E. Satterthwaite, H. M. Engle, T. B. Jenkins, and Thos. Meehan.

The list of members embrace names from all parts of the Union, as the annual volumn of proceedings is the next best thing to being present personally. The annual fee for membership is two dollars. President, Josiah Hoopes, West Chester; Secretary, W. P. Brinton, Christiana.

The American Agriculturist Toward Horticultural Journals.

We are determined that our equanimity shall not be disturbed, although often many provoking occasions arise for an outburst of temper. Several criticisms appeared last fall in the *Agriculturist* and *Hearth and Home*, about the horticultural journals of the United States, and with rather more than usual to say about THE HORTICULTURIST. We only laughed when we read them, and then put the papers away, and have never looked at them since. The public will learn ere long, that *small shot* do very little harm against "iron clads," and we think lovers of horticulture had better not stop taking or reading their horticultural journals, because the *pepper* and *mustard* of one editor's spice box happened to be stronger than usual. There is good enough yet left among the *ruins*. We do not remember that these two journals have ever said many good words for horticultural journals generally during the past five years.

A Freak of Fashion.

One of our fair American ladies has been indulging in a quiet, yet curious way of humbugging fashionable visitors. She has an orange plant in her parlor, which bears neither bud or blossom, but she has made two full blown flowers, and one half-opened bud of *wax*, and placed them upon the barren stalk. Her callers all admire the sweet perfume of the lovely flowers, and the gentlemen often remark that the bud has considerably expanded since they were there last. After they are gone, the family have a good laugh.

Good List of Apples for Profit.

A Central New York fruit grower has made out a list of profitable varieties, and names the following which will be found to sell well, give excellent satisfaction, and ripen in succession:

6 Primate.	10 Baldwin.
10 Red Astrachan.	10 Greening.
10 Lowell, or Tallow Pippin.	10 Northern Spy.
6 Golden Sweet.	10 King.
5 Hawley.	10 Roxberry Russett.
6 Ounce.	—
7 Pound Sweet.	100 Total.

Tea Culture in California.

This at last is a failure. Out of half a million plants put out at Calistoga, only six specimens remain. The principal cause, we imagine, is from poor transportation from China. If seeds were imported, and plants propagated, success might be better.

The Lawton Blackberry.

English horticulturists are delighted over this variety—it makes a capital preserve, "when mixed with a few apples to take off the sweetness." It sounds rather odd to us over here where the vines grow wild, to read their enthusiasm over it. But what can we expect of a country where peaches are sold for $5 each, and raised in hot-house or against the wall. America is certainly ahead on fruits.

Amorphophallus Rivieri.

From indication this is to be the "coming plant" for 1873. A. S. Fuller thinks it is destined to be a general favorite, on account of its luxuriant growth, and rapid multiplication of tubers. At present they are quite high-priced.

Floral Notes.

Eucharis Amazonica.

The *Garden* says that: "So rapidly has this noble stove plant grown in the estimation of the plant-growing public, that it is already almost as indispensable to the stove collection as is the lily of the valley and the white camellia to the bouquet-maker. Indeed, the Eucharis bids fair to rival either of these, even with the Covent Garden people, and it is very extensively used among cut flowers. For room, stove, and, in the summer, conservatory decoration, it is equally valuable. To this we have to add that the best plants of it ever shown were grown by Mr. Howard, gardener at Bedford Hill, Balham, and that his success resulted from heavy waterings occasionally with mild liquid manure, a genial stove temperature, and repeatedly syringing them when in a state of growth. It is another illustration of the fact that cultivators generally have a poor idea of the true requirements of plants as regards moisture at the root when in a growing state. The splendid specimens we allude to, like other things grown by the same skillful cultivator, were not, when in want of water, simply watered once, but the first was considered merely a preliminary dose, and two others given. The fact is that, instead of the common statement made so repeatedly in the gardening journals, that most plants perish from over-watering, being true, the opposite is the case. Most pot plants that die perish from insufficient watering. Let it not be inferred from this that we recommend frequent waterings: one thorough one will save a dozen dribblings such as gardeners too often give, and therefore save time, and be far more effective and wholesome for the plants.

White Scarlet Sage.

A new variety of the *Salvia Splendens* has been originated by H. E. Chitty, of Paterson, N. J., with *white flowers only*, and dwarf growing habit, known as the *Salvia Splendens Compacta Alba*. At the last fall exhibition of the Massachusetts Horticultural Society, in Boston, September 16th to 20th, it received high commendation.

Willow-Leaved Amaranth.

In a majority of places this year this Amaranthus Salicifolius has had remarkable success, and promises to be still more popular. We have seen it under a number of adverse conditions, but its growth here this year demonstrates its general adaptedness to this country.

A Floral Curiosity.

In Santa Clara, Cal., there has been grown this year by J. B. Rinehart, a black lily with three large blossoms, each nine inches long, and perfectly black. The outside of the leaves are green, while the inside and edges are black. This might be called a floral phenomenon.

Flowers in London.

The demand for flowers in London is said to be astonishing, and the prices given for them amazing. The dinner tables at fashionable parties and meetings are said to be regular bowers of flowers and ferns. At a recent dinner the flowers cost $1,000, and *the peaches* 12 *guineas* per dozen, or $5 per peach.

Eucharis Amazonica.

A correspondent of *The Garden* considers this one of the most valuable of winter flowering plants: not that it usually flowers during the dull season of the year, but it is one of those accommodating plants that may be forced into flower at any time by the use of bottom heat and a little judgment. Their great waxy blooms are well nigh invaluable for bouquets, floral decorations, or for ladies' hair. For the last mentioned purpose they stand unrivaled; Phalaenopsis blooms not even excepted.

A Large Fuchsia.

In the garden of the Knight of Kerry, at Valencia, there bloomed the past year a fuchsia, Ricarlorici, whose circumference measured 124½ feet around the extremes of the branches.

The Clematis as a Garden Flower.

In a little volume, just published in England, bearing the above title, there is an elaborate plea for the freer use of the Clematis in garden scenery. "An inappropriate position can scarcely be found, at home in dressed ground, as bedding plants, as pillar plants, as umbrella plants, as single plants, or in masses, about ruins or rockwork, or amongst grotesque arrangements of tree stumps, they are equally at home. In fact, the bed, the pillar, the wall, the rock, or whichever it may be, is merely the skeleton or foundation on which the glorious blossoms of the Clematis are to be displayed. Viewed in this light, the *rootery* (over tree stumps) is one of the most appropriate of all places in which to introduce these splendid plants, inasmuch as its picturesque irregularities—its trunks and arms—just serve as supporters of the gorgeous purple vestments of Queen Clematis, and become, so to speak, the train bearers, who spread them out in all their rich exuberance and amplitude, before the gaze of her admiring and astonished devotees.

The details of culture under this head are much the same as those which are required for pillar plants; a deep rich soil must be provided, then annual manuring, and in the summer, liquid manures.

In regard to training, all that will usually be required will be to lead the young shoots, during their spring and early summer growth, as evenly as possible, over the manes of roots—or rock if planted on a rockery—leaving them afterwards to fill out the picture in their own natural way.

The Ivy-Leaved Pelargonium.

The Garden says, that amongst the numerous plants now in use for the ornamentation of hanging baskets, for draping vases, or for training loosely up conservatory pillars, few surpass the Ivy-Leaved Pelargonium. The green and bronze-leaved varieties are also suitable for use in this way, but the variegated varieties are the most attractive. In addition to their graceful habits of growth, they possess the great advantage of almost entire immunity from the attacks of insects. This is a great desideratum, more especially in the care of plants that are suspended over others; as in this position, if infested with insects, they quickly communicate them to all plants that grow below them. They are also plants of easy culture, and strike freely in sand and loam in small pots.

Ordinary loam, to which has been added a little well-rotted manure and sand, suits them perfectly. They require little attention beyond stopping, in order to induce them to break sufficiently to afford the proper amount of shoots to give them a well-furnished appearance. An eight or ten inch pot will be found large enough for them, and for large hanging-baskets, two or three plants may be put together, or they may be mixed in this way with other plants, suitable for this description of decoration.

The old plants may be cut back, and induced to break afresh, or young ones may be struck, and the old ones thrown away, when the baskets or vases are refilled.

New Double Geranium, "Jewel."

The *Journal of Horticulture* says that Thos. Laxton, famous for his experiments in hybridizing pears, has also originated a remarkable double Geranium, named "Jewel." The great charm of the flower is the remarkably double form of each pip. Mr. Laxton compares it to a miniature rose. It will be of great value for button hole bouquets. The habit of the plant is dwarf, and it blooms very freely. Received a first-class certificate from Royal Horticultural Society.

Curiosities of American Floriculture.

Peter Henderson writes *Hearth and Home* that the *Smilax* seems almost entirely uncultivated among florists around London. Many readers will be surprised to learn the extent to which it is cultivated in this country. "There are in New York and Boston, probably twenty greenhouses, having an area of 20,000 feet, used exclusively for the growing of *Smilax*. Besides this, thousands are grown as window plants by private individuals. No plant is better fitted for house culture, as it grows in any temperature, from 50° to 75°, and does well in comparative shade. Some of the English florists were surprised to hear how a plant they so much neglected, was valued here. They may probably wake up to its value, but it will take time. It took three years for the New York florists to find out that their contemporaries in Boston were far ahead of them in the cultivation of Smilax and Rosebuds; and even to-day, 'Boston rosebuds' bring ten per cent. more in New York than home grown, for no other reason than that they come from Boston. It is probable that $40,000 have been expended the past season, in the vicinity of New York, in erecting greenhouses for the growing of these two articles alone.

The Campanula Vidalii

Is recommended as a perfect gem for the greenhouse. It is a low growing plant, with racemes of pure white bell-shaped flowers.

Hot Water,

According to Mr. Meehan, is not economical in small greenhouses. Brick flues are much cheaper and more economical. In large houses, however, the hot water apparatus is recommended as the best.

Propagating Honeysuckles.

One of the simplest methods is to bend down a branch in spring and cover a portion of it in the earth; by autumn it will be well rooted, and can then be separated from the parent plant. Cuttings made in spring or winter will usually grow when planted in the open ground in the same manner as we do with currants.—*Rural New Yorker.*

Fuchsias from Seed.

Fuchsias are readily grown from seed, and usually vary widely from the original stock. The seed pods should be allowed to remain on the plant until they fall off; then lay them aside for a few days, or until they begin to decay. The seed may then be washed from the pulp and spread upon paper to dry. They may be sown immediately, or kept for a few months in paper bags. Sow the seeds in fine, sifted soil composed of leaf mould and sand, covering not more than an eighth of an inch deep; sprinkle the soil with water, being careful not to wash away the seed; then place the pots or boxes containing them in a warm place, giving water as required. When the seedlings are large enough to handle, pot off singly into small thumb pots. As the plants become large and strong, shift into larger pots.—*Rural New Yorker.*

Editorial Notice.

Vegetable and Flower Seeds.

Mr. J. J. H. Gregory, of Marblehead, Mass., is well known as one of the few leading seed growers in this country. He was the original introducer of the Hubbard squash and many other of our new and valuable vegetables. All seeds from him are warranted fresh and reliable. His advertisements will be found in this number, and we invite attention to them. His illustrated catalogue for 1873 (now ready) will be sent free to all applicants.